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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/614,794	07/12/2000	Haldane S. Henry	SC11152ZP	2567

23330 7590 03/15/2002

MOTOROLA, INC.  
CORPORATE LAW DEPARTMENT - #56-238  
3102 NORTH 56TH STREET  
PHOENIX, AZ 85018

EXAMINER

OWENS, DOUGLAS W

ART UNIT PAPER NUMBER

2811

DATE MAILED: 03/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/614,794

Applicant(s)

HENRY ET AL.

Examiner

Douglas W Owens

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1) ☒ Responsive to communication(s) filed on 18 January 2002.

2a) ☐ This action is FINAL.

2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4) ☒ Claim(s) 1-34 is/are pending in the application.

4a) Of the above claim(s) 22-33 is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) 1-10, 13, 14, 19-21 and 34 is/are rejected.

7) ☒ Claim(s) 11, 12 and 15-17 is/are objected to.

8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on 12 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some \* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.

4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other:

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of the invention of group I, claims 1-21 and 34 in Paper No. 6 is acknowledged.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The scope of the claims are unclear because they require that the second layer be under an edge of the first layer, when the independent claims require that the second layer is over the first layer.

***Claim Rejections - 35 USC § 102***

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-5, 7, 8, 10, 13, 14, 18, 20 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Loboda.

Regarding claim 1, Loboda teaches an electronic component comprising:

a substrate;

an airbridge with a first layer (12) and a second layer (13) over the first layer;

wherein;

the airbridge is conductive (Col. 2, lines 41-48 and Col. 4, lines 42-48); and

the first layer is less resistive than the second layer.

Regarding claim 2, Loboda teaches an electronic component, wherein the second layer is a passivation layer.

Regarding claim 3, Loboda teaches an electronic component, wherein the second layer is harder than the first layer.

Regarding claims 4 and 5, Loboda teaches an electronic component, wherein a gap exist between a portion of the airbridge and the substrate, and the thickness of the second layer is less than fifty percent of that of the first layer and the gap combined.

Regarding claim 7, Loboda teaches an electronic component, wherein the second layer is absent underneath a center portion of the airbridge.

Regarding claims 8 and 18, Loboda teaches an electronic component, wherein an unsealed gap exists underneath a portion of the airbridge.

Regarding claim 10, Loboda teaches an electronic component, wherein a third layer (10) is disposed beneath the first layer, wherein the third layer is less conductive than the first layer.

Regarding claim 13, Loboda teaches an electronic component, wherein the second layer of the airbridge is insulative.

Regarding claim 14, Loboda teaches a semiconductor component comprising:  
a substrate;  
a semiconductor device (Col. 2, lines 30-34);  
a first insulative layer (11) over the substrate;  
an airbridge over the substrate and coupled to the device; wherein  
the airbridge has a first conductive layer (12) and a second insulative layer (13).

Regarding claim 20, Loboda teaches a method of making an electronic component comprising:

forming a first layer (12) over the substrate;  
forming a second layer (13) over the first layer; wherein  
the airbridge is conductive; and  
the first layer is less resistive than the second layer.

Regarding claim 21, Loboda teaches a method further comprising:  
forming a semiconductor device within the substrate (Col. 2, lines 30-34);  
forming an insulative layer (11) over the device and substrate; wherein  
forming the first layer comprises providing a conductive material; and  
forming the second layer comprises providing an insulative material.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loboda.

Regarding claims 9 and 19, Loboda does not teach an airbridge wherein the second layer has a compressive stress level of 0 to 200 MegaPascals. The stress level of the second layer would have been dependent upon the thickness. It would have been a matter of obviousness for one of ordinary skill in the art to arrive at the optimal thickness through routine experimentation.

7. Claims 11, 12 and 15-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The art of record does not teach a second layer that is conductive or a conductive barrier underneath the first conductive layer, wherein the conductive barrier is more resistive than the first conductive layer.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas W Owens whose telephone number is 703-308-6167. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on 703-308-2772. The fax phone numbers for

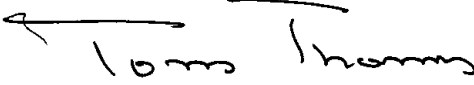
Application/Control Number: 09/614,794  
Art Unit: 2811

Page 6

the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

DWO  
March 11, 2002

  
TOM THOMAS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800